CLAIMS

1.   A method in a computer system for indicating direct and indirect relationships among a plurality of data records in a data repository to a designated record, each record having a plurality of data fields with values, comprising:

determining, from the plurality of data records, a set of records that are directly-related to the designated record, such that at least one data field has a common value in the designated data record and in each of the records in the set;

using the set of directly-related records, automatically determining from the plurality of data records a potential family of records that includes the set of directly-related records and records that are indirectly related to each other through a plurality of designated data fields;

adding the designated record to the potential family of records when it is automatically determined that the designated record is not a duplicate of one of the data records in the potential family of records; and

automatically setting an indicator in each of the data records in the potential family of records to indicate a family relationship between the records.

2.   The method of claim 1 wherein the determination of records that are indirectly related to each other comprises determining that a first record shares a value of a first data field in common with a second record but not with a third record and that the second record shares a value of a second field in common with the third record but not with the first record, thereby indicating an indirect relationship between the third record and the first record.

3.   The method of claim 2 wherein the determination of records that are indirectly related to each other further comprises determining that the third record shares a values of a third field in common with a fourth record, thereby indicating an indirect relationship between the fourth record and the first record.

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4.   The method of claim 1 wherein the determination of records that are indirectly related to each other progressively determines all records in the plurality of data records that are indirectly related to each other through the plurality of designated fields as new such records are determined.

5.   The method of claim 1, further comprising:

using the set of directly-related records, automatically determining a second set of directly-related records for at least one of the records in the set; and

combining the at least one second set with the set of directly-related records to form a primer set to use for automatically determining a potential family of records.

6.   The method of claim 1, further comprising determining whether a plurality of family relationships between the records is to be merged into one family relationship.

7.   The method of claim 1, further comprising:

using the indicated at least one family relationship to automatically retrieve a family of data records; and

using the retrieved data records to automatically determine a set of locations to which an object is to be sent.

8.   The method of claim 1, further comprising:

using the indicated at least one family relationship to automatically retrieve a family of data records; and

using the retrieved data records to automatically complete a field in a first data record of the retrieved data records based upon a second data record of the retrieved data records.

9.   A method in a computer system for indicating a family relationship among a plurality of data records in a data repository to a designated record, each record having a plurality of data fields with values, comprising:

automatically determining a set of data records from the plurality of data records that relate directly to the designated record and data records that relate indirectly to the designated record; and

adding the designated record to the determined set when it is automatically determined that the designated record is not a duplicate of a data record in the determined set; and

automatically associating with each record of the determined set an indication of membership in at least one family relationship.

10.   The method of claim 9, further comprising, when a designated record is determined to be the duplicate of the data record, automatically deleting the designated record.

11.   The method of claim 10, further comprising automatically first consolidating data fields between the designated record and the determined duplicate data record before automatically deleting the designated record.

12.   The method of claim 9 wherein the automatic determination of the set of data records that relate is based upon at least one designated data field.

13.   The method of claim 12 wherein the designated data field comprises at least one of a name, an address, and a phone number.

14.   The method of claim 12 wherein the value of the designated data field is normalized according to a set of conventions.

15.   The method of claim 9 wherein indicators of a plurality of family relationships are associated with the records of the determined set.

16. The method of claim 9 wherein the automatic determination of the set of data records locates all records in the plurality of data records that relate directly to any one of the other records based upon a plurality of designated data fields.

17. The method of claim 9 wherein the automatic determination that the designated record is not a duplicate examines values of a plurality of data fields.

18. The method of claim 17 wherein the plurality of fields includes at least one of a name field, an address, and a phone number field.

19. The method of claim 9, further comprising:

using the indicated at least one family relationship to automatically retrieve a family of data records; and

using the retrieved data records to automatically determine a set of locations to which an object is to be distributed.

Sub AI7 20. The method of claim 20 wherein the automatically determined locations are used in a direct mailing process.

21. The method of claim 20 wherein the object is a marketing tool.

22. The method of claim 21 wherein the marketing tool is a sales catalog.

Sub AI7 23. The method of claim 20 wherein the object is a product.

24. The method of claim 20 wherein the automatic determination of locations from the family of data records controls the number of duplicate objects being distributed.

25.   The method of claim 20 wherein the determining of the locations determines locations that correspond to unique individuals.

26.   The method of claim 20 wherein the determining of the locations determines locations that correspond to unique addresses.

27.   The method of claim 9, further comprising:

using the indicated at least one family relationship to automatically retrieve a family of data records; and

using the retrieved data records to automatically determine all of the data records that relate to a specified value of a designated field.

28.   The method of claim 27 wherein the specified value is a name.

29.   The method of claim 27 wherein the specified value is an address.

30.   A computer-readable memory medium containing instructions for controlling a computer process to indicate a family relationship among a plurality of data records in a data repository to a designated record, each record having a plurality of data fields with values, by:

automatically determining a set of data records from the plurality of data records that relate directly to the designated record and data records that relate indirectly to the designated record; and

adding the designated record to the determined set when it is automatically determined that the designated record is not a duplicate of a data record in the determined set; and

automatically associating with each record of the determined set an indication of membership in at least one family relationship.

31. The computer-readable memory medium of claim 30, further comprising instructions that, when a designated record is determined to be the duplicate of the data record, automatically delete the designated record.

32. The computer-readable memory medium of claim 31, further comprising instructions that automatically first consolidate data fields between the designated record and the determined duplicate data record before automatically deleting the designated record.

33. The computer-readable memory medium of claim 30 wherein the automatic determination of the set of data records that relate is based upon a plurality of designated data fields.

34. The computer-readable memory medium of claim 33 wherein the values of the designated data fields are normalized according to a set of conventions.

35. The computer-readable memory medium of claim 30, further comprising instructions that control the computer processor by:

using the indicated at least one family relationship to automatically retrieve a family of data records; and

using the retrieved data records to automatically determine a set of locations to which an object is to be distributed.

36. The computer-readable memory medium of claim 35 wherein the automatically determined locations are used in a direct mailing process.

37. The computer-readable memory medium of claim 35 wherein the automatic determination of locations from the family of data records controls the number of duplicate objects being distributed.

38.   The computer-readable memory medium of claim 30, further comprising instructions that control the computer processor by::

using the indicated at least one family relationship to automatically retrieve a family of data records; and

using the retrieved data records to automatically determine all of the data records that relate to a specified value of a designated field.

39.   The computer-readable memory medium of claim 38 wherein the specified value is a name.

40.   The computer-readable memory medium of claim 38 wherein the specified value is an address.

41.   A record management system comprising:

automatic de-duplication engine that, upon receiving a designated data record,

automatically determines a set of data records from a plurality of data records in a data repository that relate directly to the designated record and data records that relate indirectly to the designated record;

adds the designated record to the determined set when it is automatically determined that the designated record is not a duplicate of a data record in the determined set; and

automatically associates with each record of the determined set an indication of a family of related data records.

42.   The record management system of claim 41, further comprising a query engine that retrieves a set of data records that indicated a designated family of related data records.

43.   The record management system of claim 42 further comprising a process that uses the retrieved data records to automatically determine a set of targets to which to distribute an object.

44. The record management system of claim 43 wherein the process is a direct mail application.

45. The record management system of claim 42 further comprising a process that uses the retrieved data records to automatically complete data values in at least one of the retrieved data records.

46. The record management system of claim 41 wherein the automatic de-duplication engine automatically determines whether the designated record is a duplicate of a second record and deletes one of the designated record and the second record when the designated record is the duplicate of the second record.

47. The record management system of claim 46 wherein the automatic de-duplication engine automatically first consolidates values of the designated record and the second record prior to deletion.

48. The record management system of claim 41 wherein the automatic determination of the set of data records that relate includes identifying data records that relate indirectly through a plurality of levels of indirection.

49. The record management system of claim 41, further comprising a table that controls the determination of whether the designated data record is a duplicate data record.

50. The record management system of claim 41, further comprising a table of data value conventions that are used to normalize values in the designated data record.